12-17-07

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December 10, 2007

To:
Commissioner for Patents
USPTO
P.O. Box 1450
Alexandria, VA 22313-1450
USA

Attention: Office of Petition

From:

Application No.:	10/527,747
Filing Date:	03/14/2005
Inventor:	David SMALL
Our Ref:	0004-SwitchedAntennas-US
Address for service:	David Small Locata Corporation 9 Island View Irvine, CA 92604

12/18/2007 CNEGA1 00000063 10527747
01 FC:2452 255.00 OP

Title:	System and method for the mitigation of multipath and the improvement of signal-to-noise ratios in time division multiple access (tdma) location networks
Art Unit:	3662
Examiner:	PHAN, DAO LINDA

Petition for revival of abandoned application pursuant to 37 CFR 1.137(a) (Unavoidable)

Dear Sir/Madam,

It has recently been brought to our attention by an investment company conducting due diligence on our applications that the above-identified application has become abandoned. The Patent Application Information Retrieval (PAIR) system indicates that this application became abandoned on April 29, 2007 for failure to respond to an Office Action.

The address for service for this application is 9 Island View, Irvine CA 92604.

The PAIR system shows that an 'Office Action Summary' was mailed to this address for service on October 31, 2006. The PAIR system also shows that a 'Notice of Abandonment' was mailed to this address for service on May 31, 2007.

The resident of this address is Dr. John Sanderson, MD. Dr. John Sanderson, MD did not receive an Office Action from the USPTO and nor did he receive a Notice of Abandonment. Therefore, we were not aware that this application had been examined nor abandoned. Consequently, we had not filed a timely reply to the Office letter mailed October 31, 2006.

It was never our intention to abandon this application. The lack of response to the Office Action is a result of not having received the Office Action. Therefore, we ask that you consider revival of the above-identified abandoned application in light of these unavoidable circumstances.

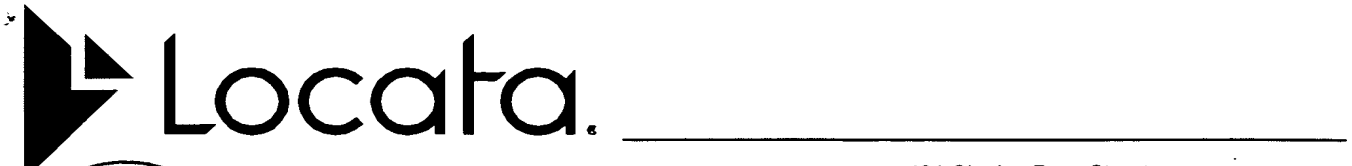
This petition is accompanied by:

a) The reply required to the outstanding Office Action;
b) The petition fee pursuant to S 1.17(1); and
c) A letter from Dr. John Sanderson, MD declaring that he has never received an Office Action.

Please let me know if you have any questions or let me know if this petition is in anyway incomplete.

Thank You

Nunzio Gambale
CEO - Locata Corporation



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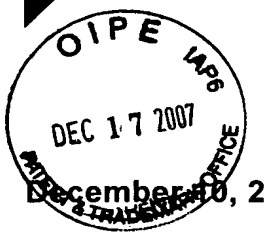

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Address for service:	David Small Locata Corporation 9 Island View Irvine, CA 92604
Title:	System and method for the mitigation of multipath and the improvement of signal-to-noise ratios in time division multiple access (tdma) location networks
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(b) Petition fee pursuant to 37 CFR 1.17(1)

The following petition fee pursuant to 37 CFR 1.17(1)(l) is submitted in conjunction with the petition to revive the above-identified abandoned application.

Amount: $255

Payment method: Credit Card Payment Form attached.

Thank You

Nunzio Gambale
CEO - Locata Corporation

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(a) Reply required to the outstanding Office Action

The following reply to the outstanding Office Action is submitted in conjunction with the petition to revive the above-identified abandoned application.

The Office Action mailed October 31, 2006 is a non-final action that deems claims 1 – 20 as pending in the application because there are no status identifiers for new claims 1 – 20 and explains that *new/added claims must have "new" as a status identifier and that the new claims should be renumbered starting as claim 13 and so on.*

In response, we hereby submit a copy of the claims showing old claims 1 – 12 as "cancelled" and new claims 13 – 32 as "new".

Thank You

Nunzio Gambale
CEO - Locata Corporation

What is claimed is:

1. (cancelled) A method for mitigating multipath and improving received signal-to-noise ratios in a Time Division Multiple Access location network, the method comprising:

a) deploying a plurality of chronologically synchronized positioning-unit devices, positioned at known locations, and transmitting positioning signals in a predetermined Time Division Multiple Access sequence, such that each said positioning-unit device transmits a unique positioning signal in a unique transmission time slot;

b) deploying a position receiver configured with a directionally agile beam antenna;

c) receiving and interpreting said unique positioning signals to determine directionally agile beam antenna circumstance;

d) consecutively steering said directionally agile beam antenna, based on said determined directionally agile beam antenna circumstance, in spatial synchronization with said Time Division Multiple Access positioning-unit device positioning signal transmissions,

such that said directionally agile beam antenna directional gain pattern remains oriented toward the currently transmitting positioning-unit device, or remains oriented toward the origin of the currently received positioning-unit device positioning signal.

2. (cancelled) The method of claim 1, wherein said directionally agile beam antenna circumstance may include determination of one or more input variables selected from the group consisting of positioning-unit device locations, positioning-unit device Time Division Multiple Access transmission sequences, directionally agile beam antenna position, positioning-unit device positioning signal propagation delays, and network time.

3. (cancelled) The method of claim 1, wherein said spatial synchronization may be offset from network time in order to allow for positioning-unit device positioning signal propagation delays.

4. (cancelled) A method for mitigating multipath and improving received signal-to-noise ratios in a Time Division Multiple Access location network, the method comprising:

a) deploying a plurality of chronologically synchronized positioning-unit devices, positioned at known locations, and transmitting positioning signals in a predetermined Time Division Multiple Access sequence, such that each said positioning-unit device transmits a unique positioning signal in a unique transmission time slot;

b) deploying a position receiver configured with a directionally agile beam antenna, and an attitude determination means to provide attitude data for said directionally agile beam antenna;

c) receiving and interpreting said unique positioning signals and said attitude data to determine directionally agile beam antenna circumstance;

d) consecutively steering said directionally agile beam antenna, based on said determined directionally agile beam antenna circumstance, in spatial synchronization with said Time Division Multiple Access positioning-unit device positioning signal transmissions,

such that said directionally agile beam antenna directional gain pattern remains oriented toward the currently transmitting positioning-unit device, or remains oriented toward the origin of the currently received positioning-unit device positioning signal.

5. (cancelled) The method of claim 4, wherein said directionally agile beam antenna circumstance may include determination of one or more input variables selected from the group consisting of positioning-unit device locations, positioning-unit device Time Division Multiple Access transmission sequences, directionally agile beam antenna position, directionally agile beam antenna attitude, positioning-unit device positioning signal propagation delays, and network time.

6. (cancelled) The method of claim 4, wherein said spatial synchronization may be offset from network time in order to allow for positioning-unit device positioning signal propagation delays.

7. (cancelled) A system configured to mitigate multipath and improve received signal-to-noise ratios in a Time Division Multiple Access location network, the system comprising:

a) a plurality of chronologically synchronized positioning-unit devices, positioned at known locations, and configured to transmit positioning signals in a predetermined Time Division Multiple Access sequence, such that each said positioning-unit device transmits a unique positioning signal in a unique transmission time slot;

b) a position receiver configured with a directionally agile beam antenna, configured to consecutively steer a directional gain pattern in a plurality of directions;

c) said position receiver configured to receive and interpret said unique positioning signals to determine directionally agile beam antenna circumstance;

e) said directionally agile beam antenna configured to consecutively steer said directional gain pattern, based on said determined directionally agile beam antenna circumstance, in spatial synchronization with said Time Division Multiple Access positioning-unit device positioning signal transmissions,

such that said directionally agile beam antenna directional gain pattern remains oriented toward the currently transmitting positioning-unit device, or remains oriented toward the origin of the currently received positioning-unit device positioning signal.

8. (cancelled) The system of claim 7, wherein said directionally agile beam antenna circumstance may include determination of one or more input variables selected from the group consisting of positioning-unit device locations, positioning-unit device Time Division Multiple Access transmission sequences, directionally agile beam antenna position, positioning-unit device positioning signal propagation delays, and network time.

9. (cancelled) The system of claim 7, wherein said spatial synchronization may be offset from network time in order to allow for positioning-unit device positioning signal propagation delays.

10. (cancelled) A system configured to mitigate multipath and improve received signal-to-noise ratios in a Time Division Multiple Access location network, the system comprising:

a) a plurality of chronologically synchronized positioning-unit devices, positioned at known locations, and configured to transmit positioning signals in a predetermined Time Division Multiple Access sequence, such that each said positioning-unit device transmits a unique positioning signal in a unique transmission time slot;

b) a position receiver configured with a directionally agile beam antenna, configured to consecutively steer a directional gain pattern in a plurality of directions;

c) an attitude determination means configured to provide attitude data for said directionally agile beam antenna;

d) said position receiver configured to receive and interpret said unique positioning signals and said attitude data to determine directionally agile beam antenna circumstance;

e) said directionally agile beam antenna configured to consecutively steer said directional gain pattern, based on said determined directionally agile beam antenna circumstance, in spatial synchronization with said Time Division Multiple Access positioning-unit device positioning signal transmissions,

such that said directionally agile beam antenna directional gain pattern remains oriented toward the currently transmitting positioning-unit device, or remains oriented toward the origin of the currently received positioning-unit device positioning signal.

11. (cancelled) The system of claim 10, wherein said directionally agile beam antenna circumstance may include determination of one or more input variables selected from the group consisting of positioning-unit device locations, positioning-unit device Time Division Multiple Access transmission sequences, directionally agile beam antenna position, directionally agile beam antenna attitude, positioning-unit device positioning signal propagation delays, and network time.

12. (cancelled) The system of claim 10, wherein said spatial synchronization may be offset from network time in order to allow for positioning-unit device positioning signal propagation delays.

13. (new) A method for determining accurate range measurements in multipath and poor signal-to-noise ratio environments and subsequently improving location determination at a position receiver incorporating a directionally agile beam antenna, said position receiver configured to receive Time Division Multiple Access (TDMA) positioning signals transmitted by a network of synchronized positioning-unit devices at known locations, the method comprising:

a) calculating the location of said position receiver from said received Time Division Multiple Access (TDMA) positioning signals, and

b) steering said directionally agile beam antenna directional gain pattern exclusively towards the origin of the currently received Time Division Multiple Access (TDMA) positioning signal, said steering responsive to:

i) said calculated location of said position receiver, and

ii) said known locations of said synchronized positioning-unit devices.

14. (new) The method of claim 1, wherein said calculating the location of said position receiver from said received Time Division Multiple Access (TDMA) positioning signals additionally includes a calculation of a network time of said positioning signals transmitted by said positioning-unit devices at known locations, and said steering is additionally responsive to said calculated network time.

15. (new) The method of claim 1, wherein said calculating the location of said position receiver from said received Time Division Multiple Access (TDMA) positioning signals additionally includes the determination of a Time Division Multiple Access (TDMA) sequence of said positioning signals transmitted by said positioning-unit devices at known locations, and said steering is additionally responsive to said determined Time Division Multiple Access (TDMA) sequence.

16. (new) The method of claim 1, wherein said calculating the location of said position receiver from said received Time Division Multiple Access (TDMA) positioning signals additionally includes a calculation of the propagation delay of said positioning signals transmitted by said positioning-unit devices at known locations, and said steering is additionally responsive to said calculated propagation delay.

17. (new) The method of claim 1 wherein said position receiver incorporating a directionally agile beam antenna is further configured with an attitude determination means, said calculating includes an additional step of determining the attitude of said position receiver, and said steering is additionally responsive to said determined attitude.

18. (new) A method for determining accurate range measurements in multipath and poor signal-to-noise ratio environments in a Time Division Multiple Access (TDMA) location network and subsequently improving the location determination at a position receiver, the method comprising:

a) deploying a plurality of synchronized positioning-unit devices at known locations transmitting positioning signals in a Time Division Multiple Access (TDMA) sequence;

b) deploying said position receiver configured with a directionally agile beam antenna;

c) configuring said directionally agile beam antenna to receive said positioning signals from substantially all directions;

d) calculating the location of said position receiver from said received positioning signals;

e) reconfiguring said directionally agile beam antenna to receive said positioning signals from substantially one direction;

f) steering said reconfigured said directionally agile beam antenna directional gain pattern exclusively towards the origin of the currently received positioning signal, said steering responsive to:

i) said calculated location of said position receiver, and

ii) said known locations of said synchronized positioning-unit devices.

19. (new) The method of claim 6, wherein said calculating the location of said position receiver from said received positioning signals additionally includes a calculation of a network time of said positioning signals transmitted by said positioning-unit devices at known locations, and said steering is additionally responsive to said calculated network time.

20. (new) The method of claim 6, wherein said calculating the location of said position receiver from said received positioning signals additionally includes a determination of a Time Division Multiple Access (TDMA) sequence of said positioning signals transmitted by said positioning-unit devices at known locations, and said steering is additionally responsive to said determined Time Division Multiple Access (TDMA) sequence.

21. (new) The method of claim 6, wherein said calculating the location of said position receiver from said received positioning signals additionally includes a calculation of the propagation delay of said positioning signals transmitted by said positioning-unit devices at known locations, and said steering is additionally responsive to said calculated propagation delay.

22. (new) The method of claim 6, wherein said position receiver configured with a directionally agile beam antenna is further configured with an attitude determination means, said calculating includes an additional step of determining the attitude of said position receiver, and said steering is additionally responsive to said determined attitude.

23. (new) A system for determining accurate range measurements in multipath and poor signal-to-noise ratio environments in a Time Division Multiple Access (TDMA) location network, the system comprising:

a) a plurality of synchronized positioning-unit devices at known locations transmitting positioning signals in a Time Division Multiple Access (TDMA) sequence;

b) a position receiver configured with a directionally agile beam antenna;

c) means configured to calculate the location of said position receiver from said transmitted positioning signals;

d) means configured to steer said directionally agile beam antenna directional gain pattern exclusively towards the origin of the currently received positioning signal, said steering responsive to:

i) said calculated location of said position receiver, and

ii) said known locations of said synchronized positioning-unit devices.

24. (new) The system of claim 11, wherein said means configured to calculate the location of said position receiver additionally includes a means configured to calculate a network time of said positioning signals transmitted by said positioning-unit devices at known locations, and said steering means is additionally responsive to said calculated network time.

25. (new) The system of claim 11, wherein said means configured to calculate the location of said position receiver additionally includes a means configured to determine a Time Division Multiple Access (TDMA) sequence of said positioning signals transmitted by said positioning-unit devices at known locations, and said steering means is additionally responsive to said determined Time Division Multiple Access (TDMA) sequence.

26. (new) The system of claim 11, wherein said means configured to calculate the location of said position receiver additionally includes a means configured to calculate the propagation delay of said positioning signals transmitted by said positioning-unit devices at known locations, and said steering means is additionally responsive to said calculated propagation delay.

27. (new) The system of claim 11, wherein said position receiver configured with a directionally agile beam antenna is further configured with an attitude determination means, said means configured to calculate the location of said position receiver includes an additional means configured to determine the attitude of said position receiver, and said steering means is additionally responsive to said determined attitude.

28. (new) A system for determining accurate range measurements in multipath and poor signal-to-noise ratio environments in a Time Division Multiple Access (TDMA) location network, the system comprising:

a) a plurality of synchronized positioning-unit devices at known locations transmitting positioning signals in a Time Division Multiple Access (TDMA) sequence;

b) a position receiver configured with a directionally agile beam antenna;

c) means configured to adjust said directionally agile beam antenna to receive said transmitted positioning signals from substantially all directions;

d) means configured to calculate the location of said position receiver from said transmitted positioning signals;

e) means configured to readjust said directionally agile beam antenna to receive said transmitted positioning signals from substantially one direction;

f) means configured to steer said directionally agile beam antenna directional gain pattern exclusively towards the origin of the currently received positioning signal, said steering responsive to:

i) said calculated location of said position receiver, and

ii) said known locations of said synchronized positioning-unit devices.

29. (new) The system of claim 16, wherein said means configured to calculate the location of said position receiver additionally includes a means configured to calculate a network time of said positioning signals transmitted by said positioning-unit devices at known locations, and said steering means is additionally responsive to said calculated network time.

30. (new) The system of claim 16, wherein said means configured to calculate the location of said position receiver additionally includes a means configured to determine a Time Division Multiple Access (TDMA) sequence of said positioning signals transmitted by said positioning-unit devices at known locations, and said steering means is additionally responsive to said determined Time Division Multiple Access (TDMA) sequence.

31. (new) The system of claim 16, wherein said means configured to calculate the location of said position receiver additionally includes a means configured to calculate the propagation delay of said positioning signals transmitted by said positioning-unit devices at known locations, and said steering means is additionally responsive to said calculated propagation delay.

32. (new) The system of claim 16, wherein said position receiver configured with a directionally agile beam antenna is further configured with an attitude determination means, said means configured to calculate the location of said position receiver includes an additional means configured to determine the attitude of said position receiver, and said steering means is additionally responsive to said determined attitude.

To: The Director,
USPTO.

Statement and Declaration in Support of Petition to Revive Pursuant to 37 CFR 1.137(a) for US Application Number 10/527,747.

Dear Sir/Madam:

My name is Dr. John Sanderson and I am tendering this document in support of the above US Application.

I am the householder at 9 Island View, Irvine CA 92604. This residence is the Address for Service for USPTO Office Actions related to the above patent application.

It has come to my attention that this patent application has been deemed by the USPTO to have been abandoned through lack of response to an Office Action that was sent to my address.

I hereby declare that I have never received an Office Action from the USPTO in relation to the above referenced patent. I respectfully submit that non-receipt of the Office Action is what led to a lack of response to the Office Action. I further declare that there has not been any intention to abandon this patent application, and a response would have been filed promptly if I had actually received an Office Action.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

Signature of John Sanderson, M.D.

12/10/07
Date of Signature

John Sanderson, MD
9 Islandview, Irvine, CA 92604